

Supplementary Materials: Removal of Hexavalent Chromium(VI) from Wastewater Using Chitosan-coated Iron Oxide Nanocomposite Membranes

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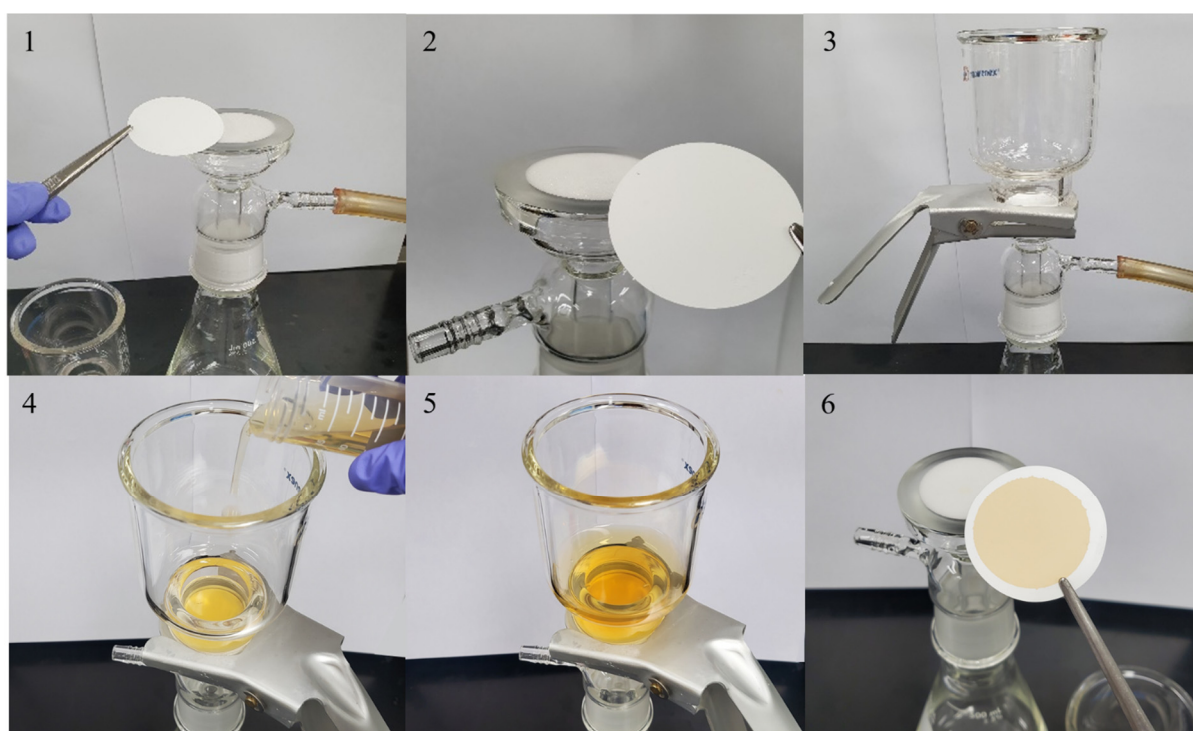


Figure S1. Procedure for the preparation of the composite membrane (Chi@Fe₂O₃-PVDF) via a vacuum filtration.

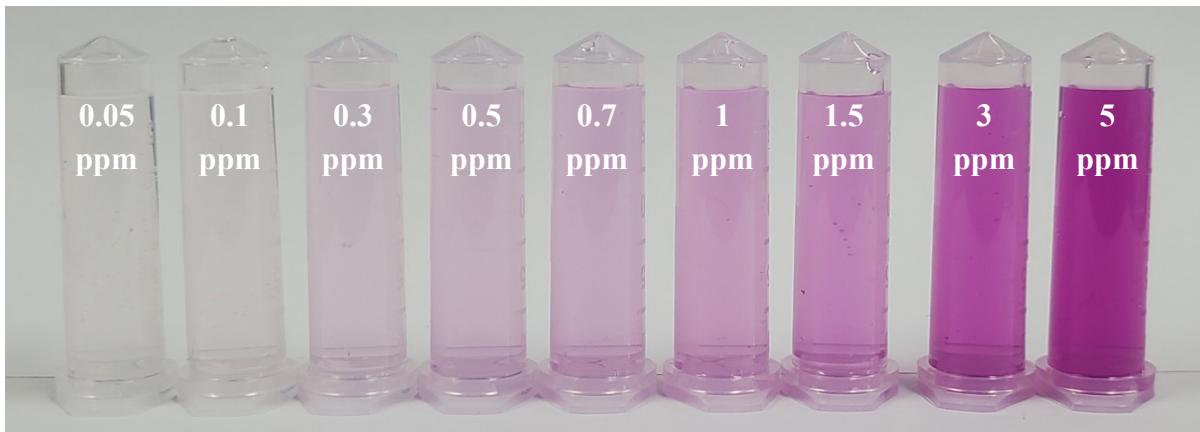
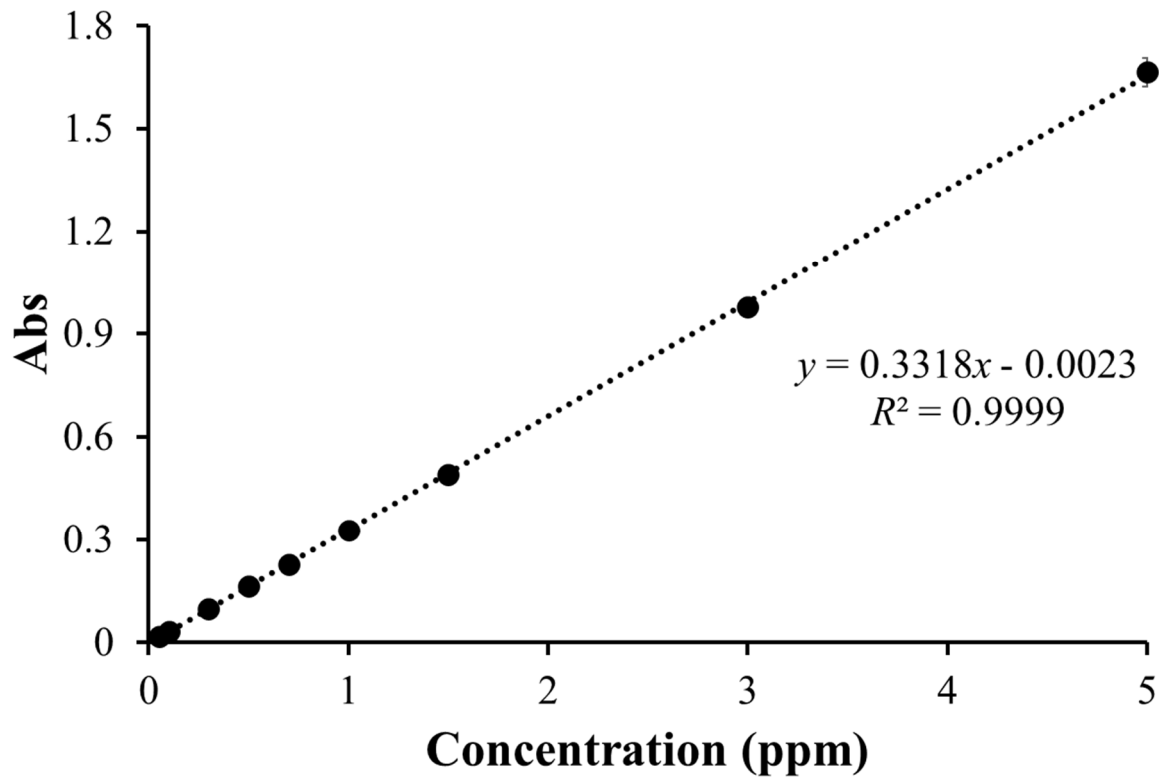


Figure S2. Linear relationship of the absorbance at 540 nm with the concentrations of Cr (VI) in water by the standard diphenylcarbazide method.

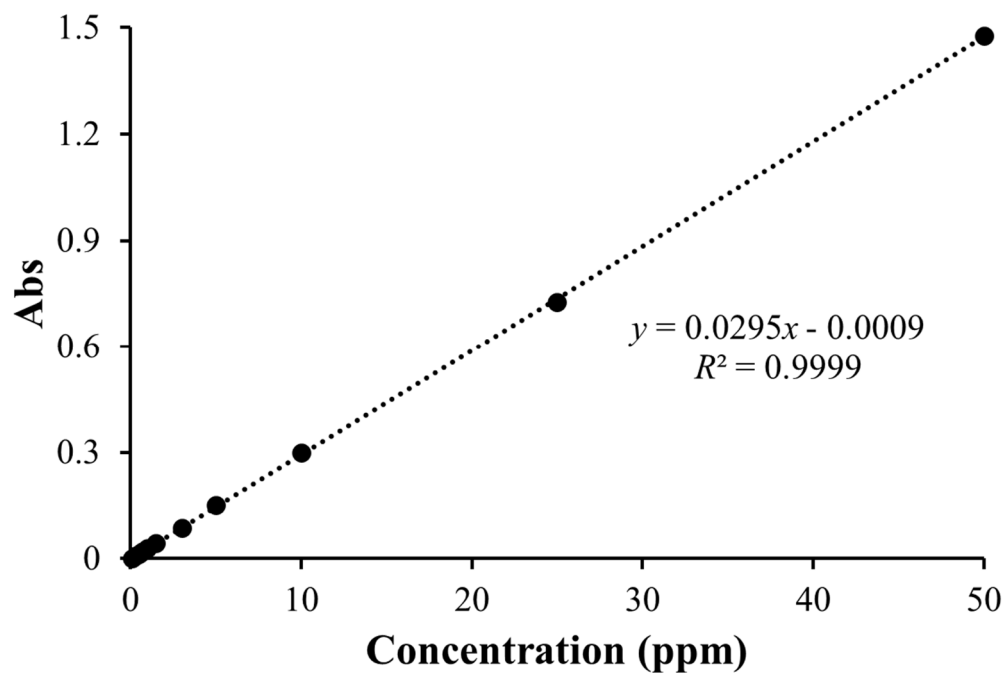


Figure S3. Linear relationship of the absorbance at 370 nm with the concentrations of Cr (VI) in water by direct method.

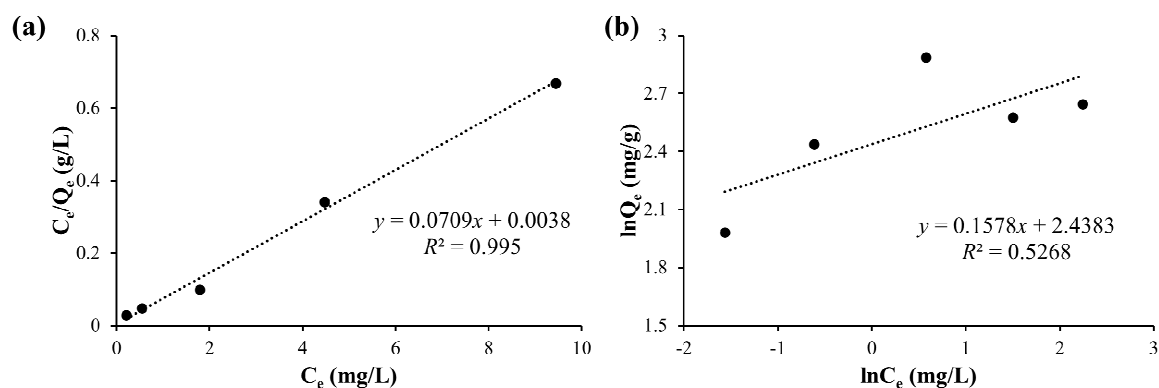


Figure S4. Adsorption isotherm for continuous in-flow experiment (a) Langmuir model, (b) Freundlich model.

Table S1. Comparison of other adsorption methods for the removal of Cr(VI) from aqueous solution.

Adsorbent	Contact time (min)	Adsorption capacity (mg/g)	Ref
GO/MNO ₂ /Fe ₃ O ₄ /Polypyrrole	1500	374.53	1
Protonated crosslinked chitosan	60	189.3	2
Deacetylated chitosan-coated magnetic adsorbent	80	24.66	3
Chi@Fe ₃ O ₄	250	142.38	4
Chi@Fe ₃ O ₄ GO	250	100.51	4
Polypyrrole/OMWCNTs NCs	300	294.18	5
chitosan cross-linked with N,N-methylene-bis-acrylamide	60	149	6
Chi@Fe₂O₃-PVDF	0.25	14.1	This work

References

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